



INITIATIVE 6

IMPROVE CAPITAL PLANNING

BEST PRACTICES AND POTENTIAL MA IMPROVEMENTS

Capital planning helps agencies establish an overall strategy for investing capital transportation dollars over the near and long-term. When there are competing needs and limited funding resources, an objective capital planning process enables decision-makers to identify the most critical needs and prioritize projects. Benefits of this approach include more cost-effective investments and productive improvements to the overall quality of a transportation system.

A capital improvement plan (CIP) is an annualized program of capital facility and equipment needs, usually programmed over a short timeframe (3-6 years) and forecast over a longer term (10-20 years). A CIP can either be "needs based" or financially constrained. A needs-based CIP presents all identified capital needs, regardless of the financial resources available. A financially constrained CIP prioritizes improvements based on the financial capacity to fund the plan.

In order to properly assess capital needs, many transit agencies and state DOTs use asset management techniques to systematically track and prioritize upcoming maintenance and replacement costs. As authorized under Chapter 25 of 2007, MassDOT is directed to develop and implement a single integrated asset management system to oversee and coordinate the maintenance, preservation, reconstruction and investment of all of the assets in its custody and control.

Chapter 25 also directs MassDOT to utilize a life-cycle cost approach during project planning and selection. Life-cycle costs shall include all relevant costs of a transportation asset's lifespan (e.g. planning, study, design, purchase or lease, operation, maintenance, repair, replacement and disposal).

Specific capital planning responsibilities of the MA Regional Transit Authorities (M.G.L. Chapter 161B) include the annual preparation of a long-range program for the construction, reconstruction or alteration of facilities for mass transportation with a schedule for the implementation and comprehensive financial estimates of costs and revenues. This plan is to be developed in consultation with MassDOT.

CURRENT PRACTICE IN MA

In Massachusetts, federal capital programs cover 80 percent of transit capital expenditures. These federal funds are distributed through formulas based on population, population density, bus revenue vehicle miles and total operating costs. Additional federal funds may be appropriated through congressional earmarks. These federal funds typically require a 20 percent state or local match, which is funded completely through the MassDOT Regional Transit Authority Capital Assistance Program (RTACAP).

The RTACAP program uses state bond proceeds to provide the non-federal match to federal transit capital funds, and to help maintain transit delivery systems in a state of good repair. Until recently, annual capital funding allocations to each RTA were based largely on historical distributions. MassDOT recently established an "interim" model for RTACAP distribution (see below), and hopes to further develop this approach to more appropriately reflect current broader RTA asset replacement and ongoing maintenance needs.



Interim Allocation Model for RTACAP Funds

The interim process to allocate and program the RTACAP¹ funds uses estimated RTA transit fleet replacement costs as a proxy for each agency's total capital needs. MassDOT calculates annual allocations as part of a two-step process.

Step I – Develop Fleet Replacement Statement

Working with the individual RTAs and the revenue service fleet information reported to the National Transit Database (NTD) program, MassDOT develops an Annual Fleet Replacement Statement. This statement identifies both the current and deferred replacement needs for each RTA's transit fleet. Unit costs are based on actual procurements made by the RTAs and other available industry data. The Fleet Replacement Statement includes a calculation of both the percentage of total fleet replacement and total fleet replacement backlog.

Step II – Develop Distribution Targets

Distribution targets are calculated based on the total available RTACAP program funding, and each agency's percentage of total statewide fleet replacement needs, as follows:

- a) For each RTA:

$$\% \text{ of Total Fleet Replacement Need}^2 * \text{Total RTACAP Funding} = \text{Raw Distribution \%}$$

- b) For Rural RTA's, an adjustment is made to recognize that the three rural transit providers do not receive FTA capital funds on a formula basis. These agencies are funded at 90% of what they would receive had FTA funds been available to them, then subtracts this rural funding to identify the remaining funds available to be shared by urban systems.

$$\text{Total RTACAP Funding} - \text{Rural Agency Allocation} = \text{Urban RTACAP Funding}$$

- c) Calculate Blended Target Distribution for each Urban RTA:

$$\% \text{ Current Fleet Replacement} * \text{Urban RTACAP Funding Total} = \% \text{ RTA Current Need}$$

$$\% \text{ Fleet Replacement Backlog} * \text{Urban RTACAP Funding Total} = \% \text{ RTA Backlog}$$

$$\text{Average of } (\% \text{ RTA Current Need}) + (\% \text{ RTA Backlog}) = \text{Target RTACAP Distribution}$$

This "blended target" averages the current fleet replacement need with the identified fleet replacement backlog. It is designed to shift greater levels of investment to areas with deferred capital needs, while maintaining funding to all agencies based on the relative size of each RTA's fleet and scope of services. In addition to fleet needs, MassDOT is now beginning to track other State of Good Repair needs such as operations facilities, passenger facilities, and equipment/systems. However, these factors have yet to be incorporated into the annual RTACAP Allocation Process.

¹ RTA Transit Capital Program (RTACAP) Policy & Procedures, MassDOT Office of Rail & Transit, revised March 2011.

² The % of Total Fleet Replacement Need is calculated as the proportion of an RTA Replacement Need divided by the Total (all RTA) Replacement Need.



In summary, the RTACAP funding allocation process does not consider actual projects that might be implemented, it simply identifies the relative share of funding each RTA will receive. Projects are then selected for implementation based primarily on local and regional input, as described below.

Regional Planning Process - Capital Project Development & Selection

For local transit projects to be eligible for funding they must be included in their Metropolitan Planning Organization's (MPO) Transportation Improvement Program (TIP). Each RTA coordinates with their respective MPO for formal approval of both Federal and State funds for their transit projects. MassDOT's annual RTACAP allocations are provided to each regional planning organization to support this process, along with a rolling five -year forecast of future allocation levels. Each regional TIP must reflect the funding levels provided in these forecasts. This policy ensures compliance with federal requirements that TIPs only include projects for which funding "can reasonably be expected to be available."

As part of an extensive statewide public process in 2003, MassDOT worked with the 13 MPOs to identify a set of project evaluation criteria. These are referenced in the state's Long Range Transportation Plan, and are to be used to assess and prioritize all transportation projects, regardless of mode (see Table 1).

Table 1: MA Transportation Project Evaluation Criteria

Type of Project	Criteria	Measure
Transit Preservation Projects	Condition	Age of asset/Remaining useful life Condition of asset Effect on user comfort, safety and health
	Usage	Operational impact and need Effect on system reliability
	Cost Effectiveness	Cost/Rider
Service Improvement Projects	Condition & Service Quality	Improvement in infrastructure condition User comfort / User convenience Effect on crowding
	Mobility	Change in total usage Travel time Connectivity/access/transfers System reliability Effect on other modes
	Safety & Security	User safety / User security Affect on other modes
	Cost Effectiveness	Capital cost/new rider Capital cost/time savings Operating cost/new rider Operating cost/time Savings
Service Expansion Projects	Same as Service Improvement, but Cost Effectiveness criteria also includes: Change in total user benefit	



MPOs have adjusted the state criteria to fit regional characteristics or reflect local priorities and have used these criteria to develop Regional Transportation Plans and TIPs. These criteria are also intended to be used in individual agencies' capital planning processes.

Project Implementation

Once allocation targets are established and regional coordination is complete, each RTA develops and submits a program of projects that MassDOT will review and endorse. These submissions include a general project description, project justification, funding sources anticipated, project schedule and cash flow. Projects are classified as State of Good Repair, System Efficiency, System Enhancement, Safety, Statutory Compliance or System Expansion. A brief basis for the project cost estimate must also be provided.

There is no local match or contribution required to obtain RTACAP funding.

RTAs are expected to expend 95% of their annual RTACAP allocation in the fiscal year the funds were distributed. However, RTAs are often challenged to spend these grants within the given timeframe. If the money is not spent bond proceeds are recaptured by the Commonwealth. As a result, RTAs have found themselves in a "use or lose" situation and to avoid losing funds, they will use RTACAP funds to make small capital purchases, such as for office furniture, computers or other equipment. While the purchases may be needed, they do not necessarily reflect investments in the system operations.

RTAs identified a variety of factors that make it challenging for them to spend their funds:

- Projects are not fully "ready to go", often because RTAs need capital funds to adequately plan for implementation.
- Federal grant awards are not subject to the same "one-year" timeframes as state match funding.
- Actual project costs exceed budget estimates and, without assurances of future funding, RTAs are not able to continue project development.
- Certain capital projects, such as large intermodal facilities or the implementation of new technologies, involve a number of technical and management complexities. RTAs may not always have capabilities in house and finding the skills slows project implementation.

BEST PRACTICES IN CAPITAL INVESTMENT PROGRAMMING

Virginia

Virginia is selected as a "Best Practice" state because it covers many aspects of capital planning and management. There is a statewide asset management system, and the Department of Rail and Public Transportation (DRPT) has established Transit Service Guidelines. These two elements, along with required local Transit Development Plans, are integrated into the capital funding process.

Virginia's Commonwealth Transportation Board (CTB) establishes administrative policies for the transportation system and allocates funding. The CTB's *Transit Sustainability and Investment Policy* includes the following goals:



- **Asset Management:** The Commonwealth's asset management system shall support the development of a statewide transit and human service capital replacement and improvement program.
- **Capital Project Programming and Evaluation:** All proposed transit projects shall:
 - Include sufficient justification and clearly address an identified transit need.
 - Include a project implementation plan.
 - Be advanced to a state of readiness for implementation within one year of the targeted award date.
 - Have reached the end of their useful life to be considered for rehabilitation or replacement (unless there is a sufficient safety, security or financial rationale).

The DRPT is responsible for evaluating capital projects according to CTB policy. All applications for Capital Assistance are evaluated using the criteria shown in Table 2.

Table 2: Virginia Capital Assistance Evaluation Criteria

Criteria	Description
Project Justification	Explanation of the need/problem that the project will address
Planning	Documentation that sufficient planning has been conducted to execute the project
Project Scope	Approach to addressing the need/problem
Project Readiness	Ability to advance the project within the fiscal year
Technical Capacity	Project management team and ability to execute the project
Project Budget	Ability to execute the project scope within the project budget
Project Schedule	Ability to execute the project scope within the project schedule
Monitoring and Evaluation Plan	Approach to measuring performance and evaluating project results
Consistency with State Asset Management System	Used to evaluate requests for replacement or rehabilitation of existing equipment
Consistency with VA Transit Service Design Guidelines & Transit Development Plan requirements	Used to evaluate requests for new systems, modes and services
Cost Benefit Data	Uses VA's Public Benefit Model to evaluate all transit "new starts"

Upon completion of the evaluation process, DRPT includes the recommended applications and allocation in the Draft Six Year Improvement Program. This program is based on projected revenues; the CTB makes actual funding allocations on an annual basis.

One capital account, the *Mass Transit Capital Fund (MTCF)*, funds specific projects selected by the CTB and allocates funds according to a hierarchy of state goals. This approach is intended to advance projects that the CTB deems most beneficial; the hierarchy is anticipated to evolve as the Commonwealth's vision and priorities change over time. For FY 12, DRPT has used the following hierarchy:



- Tier 1: Replacement/rehabilitation of revenue vehicles
- Tier 2: New/replacement facilities, new service or service expansions
- Tier 3: Discretionary programs (all other activities based on VA's transportation goals and objectives)

Finally, it is worthwhile noting that when Virginia capital assistance is used to match federal grants, the state contribution is typically 16 percent, with a 4 percent local match. If no federal assistance is involved, the local match percentage ranges from 5 to 50 percent depending on the program.

Washington State

In 2003, the Washington State Legislature implemented legislation to guide the maintenance and preservation of transportation assets and to ensure that public assets were properly maintained and preserved. Working collaboratively, Washington State DOT (WSODT) and the Washington State Transit Association (WSTA) developed tools to help agencies meet mandates. The WSTA represents the 29 transit systems operating in the state.

As a condition of receiving state funds, publicly owned transit systems are required to submit an asset management plan to the State Transportation Commission. The Commission is responsible for transportation policy development and issues the 20-year state transportation plan. Asset information is used to identify overall statewide needs and priorities for funding.

Individual asset management plans must inventory all transportation system assets and provide a preservation plan based on lowest life-cycle cost methodologies. This approach is intended to ensure that assets are maintained in an acceptable condition maximizing safety and useful life, and resulting in lower lifetime maintenance costs.

The WSDOT worked with the WSTA to establish an expert panel to develop an asset management plan framework and help individual agencies develop and submit management plans. Individual transit agency preventative maintenance programs were reviewed to assess their compliance with legislative requirements. Training and technical assistance was provided to transit agencies to help prepare individual plans.

Framework for Washington State Asset Management Plans

- A mission statement with guiding principals
- An asset inventory
- Replacement schedules and maximum useful life
- A preventative maintenance program
- A cost analysis that reflects the agency's policies and standards for preventative maintenance.

A cost model tool was developed by the expert panel to assist transit agencies with the cost analysis component. The model can be used to analyze the differences of life cycle costs of different fleets and to identify problem assets that may need to be replaced ahead of schedule. The tool was designed to be simple to use. Each agency only needs to fill in the information related to costs and frequencies. The tool will automatically generate a graph based on the information. This provides the State Transportation Commission with complete asset information in a consistent format.



Pennsylvania

Pennsylvania, like Virginia, takes an integrated approach to capital planning and budgeting, requiring asset maintenance spending plans and detailed capital budgets. Like Washington State, Pennsylvania has provided significant technical support to help local transit track asset replacement needs; PennDOT uses this data to allocate funding in a statewide discretionary program for asset improvement.

Capital Budget & Asset Maintenance Spending Plan Requirements

In 2007, the PA General Assembly passed “Act 44” that requires, among other things, each local transportation organization receiving state aid to adopt a capital budget and an asset maintenance spending plan for submission to PennDOT.

The capital budget must include:

- Descriptions of all capital projects, with projected cost and schedule.
- Projected useful life of the project.
- Proposed funding sources.
- An update on prior grant awards, with an explanation of any significant project delays.
- A five-year plan for future use of capital funds.

The asset maintenance spending plan must include:

- A description of asset maintenance expenditures in the prior year.
- Asset maintenance needs and costs projected to be funded in the upcoming year.
- A five-year plan for future use of capital funds for asset maintenance.

Asset Management Model

In an effort to assist smaller transit systems, PennDOT created a uniform capital planning model³ to provide both near term and long-term projections of capital asset needs. The platform is Microsoft Excel based and menu driven, and designed to be simple for transit agency staff to input capital asset condition. The information is then electronically submitted to PennDOT, providing the state with the following capital planning tools:

- A uniform inventory of system assets;
- A schedule of statewide capital needs;
- A framework for prioritizing investment alternatives, and
- A basis for apportioning limited public funds

Total capital spending needs are presented by fiscal year and by asset category over an extended 30-year period.

Capital Fund Allocation & Local Match

There are two primary statewide funding programs for bus transit projects. The Asset Improvement Program is a discretionary program, while the Capital Improvement Program is formula based. Act 44 establishes the total amount of program funds available for distribution within agency peer groups.

³ Capital Planning for Small and Medium Sized Transit Systems, prepared for PennDOT, August, 2006



The Asset Improvement Program account funds a statewide transit capital program based on need. The distribution of funds is discretionary, but based on factors shown in Table 3 and ranked from highest to lowest in priority.

Table 3: Pennsylvania Criteria for Ranking Asset Improvement Projects

Priority Level	Evaluation Factor
Highest Rank	Existing debt service commitment
	Matching funds for federally approved projects
	Non-federal capital projects prioritized by: <ul style="list-style-type: none"> • Emergency/mandatory/safety projects • Replacement of assets that have exceeded their useful life • Non-emergency asset replacement projects
Lowest Rank	Asset expansion, where a project shows a return on investment that improves operating efficiency and/or customer service.

The local match contribution for the Asset Improvement Program is set at 3.33 percent. The Capital Improvements Program account is distributed by formula based on passengers, and there is no local match required. There has been some consideration given to increasing the local match required to obtain state funds. Overall, transit capital investment in the state is approximately 60 percent federally supported, with slightly less than 40 percent provided by the Commonwealth.

Oregon

Oregon DOT's Flexible Funds Program directs funding from the Federal Highway Administration's Surface Transportation Program (STP) for transit, bicycle, pedestrian and transportation demand management projects. The program is of interest due to its "goal-based" scoring system.

Projects are eligible for funding if they meet federal program eligibility and can demonstrate readiness for implementation. The technical feasibility of the project and cost estimate are also reviewed. Applications are then scored based upon the following program goals and objectives:

Oregon Flexible Funds: Scoring Criteria.

- Connectivity, Integration and Overall Benefit to the Transportation System (20 points)
- Environmental Sustainability (15 points)
- Community Livability and Sustainability (15 points)
- Mobility, Access and Health (15 points)

Each project is reviewed by a "modal scoring team" with expertise in a particular transportation mode. These scoring teams prioritize applications within their assigned mode and establish three tiers of high, medium, and low priority projects. Projects are then matched to available funding. Once awarded, if a project cannot meet timelines, the next prioritized project is awarded funding.



Iowa

As detailed in *Initiative 1 – Develop and Use Service Guidelines*, many states consider transit system performance data when allocating state operating assistance. However, Iowa is presented here for its use of performance data in capital fund allocation. This practice is also utilized in certain other states (such as Pennsylvania) that maintain a general transit fund to support both operating and capital expenses.

Allocation of Capital Funds

State Transit Assistance fund distribution is primarily formula-based. Each transit system's performance during the previous year in terms of rides, miles and local funding support is factored into the formula. The formula funds can be used to support any operating, capital or planning expenses related to providing public transportation.

A Consolidated Transit Funding Application requires project justification, including a description of why vehicle upgrades or an expanded fleet is needed. A feasibility study must be prepared for the construction of a new transit facility or any substantial expansion.

New York State

There are several capital planning and management techniques used in New York State that are of interest.

- Performance measures and specific investment criteria for each goal/objective are used to help determine specific investment levels within two-tiers: a Core Program and Enhancements. Within the Core Program, transit systems are allocated funds based on their level of state-of-good repair and normal replacement needs.
- Non-MTA transit authorities in the state rely mainly on Federal funds to support 80 percent of capital investments. The New York State Dedicated Fund contributing 10 percent of the required match, with the remaining 10 percent obtained from localities.
- Projects are selected 18 months ahead of time to ensure selected projects will be “ready to go.”
- New York hopes to implement “ARRA-type” reporting requirements to better manage and oversee the capital investment process. These might include more frequent reports on the use of funds, project status and project benefits.

California

The California Transportation Commission is responsible for the programming and allocation of transportation funding. One of the capital funding programs under its purview is the *The State-Local Partnership Program (SLPP)*, which includes both formula and incentive-based funding awards.

- 95% of SLPP funds are distributed by a formula based on the local revenues received and population.
- 5% of SLPP funds are granted on a competitive basis. The Commission gives consideration to geographic balance and gives higher priority to projects that:
 - Are most cost-effective
 - Are “ready to go”
 - Can leverage more funds per program dollar
 - Can demonstrate air quality benefits or a reduction in VMT



Higher priority is also given to projects in areas without formula funding shares. The SLPP requires a significant, dollar for dollar match of local funds. (California voter referenda have provided many local transit districts with local revenues, such as taxes and fees, that can be used for capital projects.)

California also sets a variety of state level thresholds and performance targets related to capital funding⁴ and mandates that State Transportation Improvement Program (STIP) dedicate 25 percent of funding to interregional projects nominated by Caltrans and 75 percent to regional projects.

SANDAG (MPO of San Diego, CA)

The San Diego MPO (SANDAG) uses transit performance measures to assess the impact and priority of transit projects in the regional transportation plan (RTP). SANDAG does not get involved with transit performance measures and service standards related to assessing MTDB's system performance.

The impact and priority of transit capital projects in the 2030 RTP (Transit Emphasis Alternative) is assessed using the quantitative measures in Table 4 below. Transit projects are scored one to five points for each of the criteria listed. Projects are also scored based on estimates of operating and capital costs. Future criteria to be incorporated into SANDAG's planning process are anticipated to include transit service coverage and geographic balance of projects.

Table 4: SANDAG Performance Measures Used in Regional Project Selection

SANDAG Goal	Measures
Serving Commute Needs	<ul style="list-style-type: none">• % of route on roads operating at LOS "E" or "F"• Ratio of employment in region• Average route speed• Peak period ridership• Peak period ridership per service mile
Serving Transit-Supportive Corridors	<ul style="list-style-type: none">• Population within ½ mile of stations• Employment within ¼ mile of stations• # of major activity centers within ½ mile of stations• Midday and evening ridership• Midday and evening ridership per service mile.
Developing Network Integration	<ul style="list-style-type: none">• # of other transit routes connected to• # of transferring passengers (per service mile)
Cost-Effectiveness	<ul style="list-style-type: none">• Subsidy per passenger mile

MBTA Capital Investment Program

One of the highest priorities for the MBTA is the pursuit of a "State of Good Repair", meaning all assets are subject to regularly scheduled maintenance over their lifetime and replaced at the end of their useful life.

⁴ State Transit Program Guidelines (Draft), Caltrans Division of Mass Transportation, 2010



A comprehensive asset inventory has been developed to track the age and condition of all capital assets, and determine life cycle costs. The MBTA “State of Good Repair” asset management system uses this inventory to track and prioritize capital needs, and forecast financial need. Annual needs are calculated by combining lifetime maintenance costs with replacement costs, and dividing by the anticipated useful life of the asset.

- $\text{Annual Needs} = (\text{Cost to Replace} + \text{Lifetime Rehab Costs}) \div \text{Total Useful Life}$

The MBTA’s asset management system has enabled the Authority to estimate the current backlog of State of Good Repair projects: it would take \$3.0 billion to replace all outdated assets and perform deferred rehabilitation on other assets. Once a State of Good Repair is achieved, it would take about \$470 million a year to maintain this state. These “total annual life cycle costs” represent more than 50% of the current annual funding in the current MBTA Capital Budget,

The MBTA’s goal is to have all capital assets in a State of Good Repair, or functioning at their ideal capacity within their design life. However, with total capital spending limited to about \$800 million per year and many demands for expansion and enhancement, the capital need exceeds available funding. About 60% of the MBTA’s proposed FY13-17 capital program is dedicated to State of Good Repair projects.

The MBTA conducts an annual prioritization and selection process to select projects to include in the CIP based on the criteria shown in Table 5.

Table 5: MBTA Capital Project Prioritization Criteria

MBTA Criteria	Goal to be Achieved
Health & the Environment	<ul style="list-style-type: none">• Correct existing deficiencies for passengers and/or employees
State of Good Repair	<ul style="list-style-type: none">• Improve the condition of the Authority’s existing infrastructure mile.
Ratio of Cost/Benefit	<ul style="list-style-type: none">• Maximize # of passengers affected, minimize net operating cost and the debt service impacts
Operational Impact	<ul style="list-style-type: none">• Make the transportation network more effective; make investments in critical operational areas.
Legal Commitments	<ul style="list-style-type: none">• Fulfill commitments such as those included in the State Implementation Plan or needed for ADA compliance.

The MBTA also considers environmental justice in its capital investment decision-making.



SUMMARY OF BEST PRACTICES/KEY THEMES

Capital Planning

- Capital planning can be conducted at the state and/or agency level and provides a foundation for strategic investments and helps achieve system efficiencies. Most states reviewed within this best practices evaluation:
 - Utilize and publish a transparent capital planning process with clearly articulated goals and program priorities.
 - Update capital plans on an annual basis.
- Virginia integrates its required transit service guidelines and transit development plans into capital decision-making, making sure requests for enhancement projects are well thought out.
- California sets overall statewide funding targets for regional/intercity and local projects
- New York conducted a statewide needs assessment as a first step in introducing a new capital planning process.

Asset Management / State of Good Repair

- States and agencies that have asset management systems in place tend to readily use this data to inform capital decision-making. Data on aging infrastructure and equipment also present a persuasive argument that additional funding should be appropriated to support transit.
- Virginia has a statewide asset management system; New York conducted a statewide “state of good repair” needs assessment in 2007; and, Iowa, Pennsylvania and Washington electronically collect agency data to maintain a statewide asset inventory.
- Washington worked closely with the state transit association to develop a framework for asset management and to develop practical requirements.
- Agency level asset management systems are used primarily to determine asset replacement schedules and estimate long term funding needs, although more sophisticated models can help evaluate alternative funding investment scenarios.
- The MBTA has a comprehensive asset management system that has served as model for other transit agencies, and has helped articulate system needs.

Capital Fund Allocation

- Most states reviewed utilize a clear and transparent allocation method for capital fund allocation.
- Several states require Asset Management Plans as a condition for receiving state capital transit assistance (e.g. WA, PA). Most require detailed status reports on past awards before additional funding is awarded.
- Many states and localities have an established means of generating local revenues and thus providing the opportunity for local authorities to participate financially in transit investments. The level of local contribution required (or targeted) to match federal and state funds for capital projects vary from 0 to 50 percent. In Virginia, local match requirements vary year to year, based on demand for funding and available resources.



- California offers an incentive program for capital funding with priority given to projects that are cost-effective, are “ready to go”, leverage local funds and have air quality benefits.
- Oregon uses a “goal based” system to score projects applying for Flexible Funds. Projects are ranked according to their ability to meet overall program goals. Funding is reprogrammed prior to award if priority projects are not “ready to go.”
- Iowa and New York incorporate performance-based measures into the capital funding allocation process. SANDAG, the San Diego MPO, uses specific transit performance measures to rank projects for inclusion in the Transportation Improvement Program.

POTENTIAL APPLICATION IN MA

Summary of Issues

Based on a review of current practice, comparison to other states, and discussions with MassDOT, the following issues have been identified:

1. Massachusetts does not have a clearly articulated statewide strategy for capital transit investment.
 - Capital funding allocations on the state level are not necessarily based on commonly desired goals, specific project need or merits.
 - MassDOT and MPOs have identified project evaluation criteria, but these are not fully applied when allocating state transit capital funds.
2. There is no comprehensive inventory of statewide transit assets or condition, making it difficult for MassDOT to fully understand statewide transit needs.
 - Detailed fleet inventories are maintained, but recent investments in new technologies and intermodal passenger facilities necessitate that these assets also be integrated into the statewide capital planning process.
 - Mission critical maintenance facilities, shop equipment, non-revenue vehicles and life-safety equipment must also be considered.
 - Annual life cycle costs (i.e. maintenance needs) have not been identified.
3. The need for capital matching funds clearly outpaces funding availability and there is a large backlog of deferred needs. The state must set priorities for investment.
4. Appropriated funding is often not spent within established timeframes.
 - Projects are not always “ready to go”.
 - Budgets often increase after grants are awarded making it difficult to advance projects.
 - There are no consequences if RTAs are not able to achieve stated capital project goals.
 - Smaller RTAs may lack technical abilities to estimate full project costs, assess implementation risks and/or manage large construction projects.



Actions to Consider

Potential solutions and improvements—for discussion at the February workshop—to address the above issues include:

1. **Establish Strategic Goals & Capital Management Policies**
 - How should goals be developed?
 - What might these goals be? Maintain a State of Good Repair? Safety First? Support Actions that Achieve Efficiencies?
2. **Establish a Statewide Capital Planning Process**
 - How detailed should capital program guidance be? What sort of assistance is most needed?
 - What should be required of RTAs? (Note: Chapter 161B Section 8 requires RTAs to prepare an annual long-range program for mass transportation facilities, including costs and revenues, in consultation with MassDOT.)
 - What should capital plan timeframes be (3 years? 5 years? 10 years?)
3. **Introduce an Asset-Management System for RTAs**
 - Who should manage this? MBTA? MassDOT? Individual RTA's with defined template? (Note: Chapter 25 of 2007 mandates the establishment and operation of an asset management system for all MassDOT divisions.)
 - What administrative changes are needed to implement?
4. **Establish Project Selection Criteria and a Process to Prioritize Projects**
 - Design process to be fair, simple and transparent
 - How to ensure critical projects receive funding?
 - Establish two-tiered system with thresholds or targets for State of Good Repair and System Enhancement?
 - Encourage greater public participation?
 - More fully consider Cost/Benefits of potential new projects?
 - Ensure Title VI equity considered in any allocation.
5. **Maximize Use of Available Resources**
 - Establish goal to use every available federal and state dollar every year.
 - Could administrative and structural changes provide more flexibility?
 - Introduce a local match requirement?
 - How can MassDOT and RTAs work together to ensure projects are ready to go?



- How do we align MassDOT & FTA timelines for expenditure?
- What should MassDOT oversight and reporting requirements be? Should there be penalties/incentives for effective project delivery?
- Would statewide procurements help maximize efficiency?

6. Develop and/or Seek Technical Expertise

- What sort of assistance is most needed? (e.g. procurement, A/E services, project management, etc.)
- Who might provide technical assistance: MassDOT, MBTA, DCAM?
- How to improve Cost Estimating and Risk Assessment?



Sources and additional information:

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